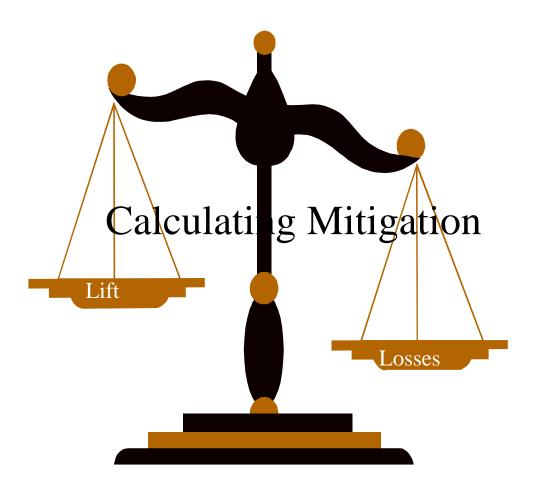
Worksheets



Version 4.1

These worksheets are provided for optional use. The purpose is to provide a consistent approach in calculating compensatory mitigation and to provide a record of evaluation. These worksheets are based on the <u>Joint State/Federal Mitigation Bank Review Team Process for Florida, Operational Draft October 1998.</u>

Changes

Version 4.0 First release to general public Version 4.1

- a. Replaced Temporal Factor Table version 4.0 with new sheet, numbered Version 4.2 and minor correction in accompanying text.
 - b. Replaced Risk Worksheet version 4.0 with version 4.1.

General Guidance

Project Worksheet (J). At least one for any single project. This sheet tallys all of the polygons. If more than six polygons, will have several pages of project worksheets. Calculates the total number of Units.

Polygon Worksheet(P). One individual polygon worksheet for each individual impact and mitigation activity. Calculates the Units per Acre for that activity.

WRAP Worksheet (W). For any single polygon, will have at least one WRAP worksheet. May have up to three WRAPS depending upon nature of activity. WRAP is performed for (1) Existing Condition; (2) With Project Condition; (3) Without Project Condition. If a functional assessment other than WRAP is used, then use a worksheet appropriate to that assessment. The scores from the WRAP worksheet are copied to the Polygon Worksheet.

Risk Worksheet (R) Will have at least one Risk worksheet per project. That Risk may apply to several polygons, if the activities are similar between polygons. The Risk score is copied to the Polygon Worksheet.

Weight Worksheet (G) Will have at least one Weight worksheet per project. The Weighting will typically be the same for all projects in a particular watershed / basin. If both impact and mitigation sites in the same watershed, will typically have only one Weight worksheet. If sites in different watersheds, will be two Weight worksheets. May be more Weight worksheets if the project includes a wide mix of work, say one that includes both cypress and mangrove, sincle will involve various watersheds.

Proximity Worksheet (X). At least one Proximity worksheet for each project. If all mitigation activities are at the same site, then only one worksheet. If mitigation activities at two or more sites, then two or more Polygon worksheets, one for each site. Score copied onto Project worksheet.

Temporal Worksheet (Table)(T). One will be attached to each project package to show where the number came from. This is a look-up table. The number from the table is copied onto the Polygon sheets.

Polygon Worksheet

- 1. Divide proposed activity into polygons at both impact site and mitigation
- 2. For each polygon you will complete a polygon worksheet
- 3. Enter a identification number in the upper right corner (i.e. P1, P2, P3 etc)
- 4. Enter the following:
 - a. Raw WRAP Score worksheet (W) convert to decimal
 - b. Weighting Worksheet completed (G)
 - c. Temporal loss factor worksheet (T)
 - d. Risk factor Worksheet (R)
 - 5. Result of Polygon worksheet (P) is units per acre of lift or loss

Polygon Worksheet	version 4.0	Polygon #	Р
P1.0 Description:			
If this polygon describes an impact activity (that			
Worksheet Wildlife Overstory copied from Utilization /Shrub	Ground Up/W Cover Buffe	er Quality	Units/Acre subtotals
P2.0 "Without Project" Condition. Probable future c P2.1 Scores from WRAP Field Data Sheet by			
w			
P2.2 Copy Weight Factor from line G8.1 or G	L L 68.2 or G8.3 dependin	g on which WRAP is "N/A"	_
G			
P2.3 Weighted "Without Project" Sub-Score.	Multiply line WRAP	score by Weight Factor	⊣ −
P2.1 X P2.2			
P3.0 "Existing" Condition. Observed condition of sit	•		
P3.1 Scores from WRAP Field Data Sheet by	ut converted to decima	al (divide raw score by 3.0)	\neg
P3.2 Same Weight Worksheet as P2.2. Cop	V C 2 1 or C 2 2 or C 2	2 depending on which is "N/A	
G see P2.2	9 66.1 01 66.2 01 66.	3 depending on which is N/A	7
P3.3 Weighted "Existing" Sub-Score. Multip	WRAP score by We		_
(P3.1)X(P3.2)			
P4.0 "Existing" minus "Without" = Units/Acre of	L L functional LIFT ascr	ibed to preservation of site	 Preserve
(P3.3)-(P2.3) + +	+	+ +	
P5.0 "With Project" Condition. For impact, typically	WRAP = zero. For m	nitigation, WRAP = fully grown	<u>.</u>
P5.1 Scores from WRAP Field Data Sheet be	ut converted to decima	al (divide raw score by 3.0)	\neg
w L			
P5.2 Same Weight Worksheet as P2.2. Cop	y G8.1 or G8.2 or G8.	3 depending on which is "N/A	<u>'</u>
G see P2.2	Aultiply W/DAD goors b	Weight Factor	
P5.3 Weighted "With Project" Sub-Score. M	lulliply WKAP score b	y Weight Factor	٦
P6.0 "With Project" minus "Existing" = Units/acr	e of functional LIFT		t)
(P5.3)-(P3.3)			Ť
P7.0 Temporal Loss Factor "T" copied from the table	e (separate worksheet) based on YS and YF	
YS (Year Start)			
YF (Year Finish)		-	\dashv
P8.0 Risk Factor "R" = 0.90 if 10% of the LIFT (line	P6 (1) may not occur	Estimate or use worksheet	
R	1 0.07 may not occur.	Totaliate of use worksheet.	\neg
P9.0 LIFT/LOSS X "T" X "R" = Units/Acre functio	nal LIFT/LOSS from	construction activity	 Balance
(P6.0)X(T)X(R) + +	+	- - - - -	

Project Worksheet

- 1. Enter a identification number in the upper right corner (i.e. J1, J2, J3 etc)
- 2. Enter that units per acre of lift or loss from polygon worksheet on project worksheet (Column B)
- 3. On project worksheet, enter acres for each polygon (column B)
 - a. Add Column A plus B times C and enter into:
 - b. Copy number to either:

D-1: on-site impact column

D-2: off-site mitigation column

D-3: on-site mitigation column

- 4. Copy Proximity factor from Proximity Worksheet for any polygons for which you have entered a number in column D-2
- 5. Subtotal each column D1 to D3
- 6. Find net sum of the 3 columns (add together) and enter on line J3.0
- a. If impact (D1) equals mitigation (D2 + D3) than the net sum will be 0; assume appropriate mitigation (always factor in common sense i.e. no downtown Miami)
- b. If impact (D1) is greater than the mitigation, than adjust number of acres in column C until it is balanced.

Project Work	sheet	version 4.0	Project	# J
J1.0 Name of Project:				
If more than 6 polygo	ons: use multiple pag	es and calculate " Ne	t" on last page. Page	of
			in column D2 and leave colu Ilt in either Column D1, or D	
Cumulative Total Un	its (if multiple pages)	<-(copy from previous page->	
Units/Acre subtot copied from Po Worksheet	lygon in the	D1 (A+B) X C On-Site Impact (Units)	D2 A+B) X C Off-Site Mitigation D2 Proximity Factor from X6.0 of Wrksht	D2 X Prox Off-Site Mitigation (Units) D3 (A+B) X C On-Site Mitigation (Units)
Polygon P	Name:	11 11		
	_		X =	
Polygon P	Name:		11 11	
	_		X ==	
Polygon P	Name:	11 11		
	_ _		X =	
Polygon P	Name:	T		
			X	
Polygon P	Name:			
			X	
Polygon P	Name:			
			X =	
Subtotals (include	previous page(s)):		· - copy onto next page>	
•	ft) - (Units of Loss)	Loss	Net Units	Lift Lift
has appropria	te compensatory mit	igation (subject to ap	(Losses), then the net sum will plication of common sense). nore polygons to bring into bal	
J4.0 Remarks				

Weighting Worksheet

Purpose is to apply value judgement to individual functions i.e. wildlife utilization may be of more important to society than their other functions. Would give wildlife more influence on the total score (credits per acre).

Assumption: Factors do not always have equal importance in an area.

- 1. Enter a identification number in the upper right corner
- 2. To use, answer 5 questions under G3.0 for each function. Answer will be 1, 2, or 3. Three is entered for highly valued functions.
- 3. Follow instructions for division or multiplication on form
- 4. You will arrive at a weighting factor that is transferred to polygon worksheet.

Weight Worksheet	version 4.0	Weight # G
G1.0 Name of Geographic Area:		
G2.0 Description:		
G3.0 Criteria Scores Wildlife Utilization	Overstory Ground Up/Wet Cover Buffer	Hydrology Water Quality
G3.1 Project results in identifia	ble ecological benefits to established waters	shed issues.
G3.2 Project will result in ident Yes=3 No=0	fiable ecological benefits to adjacent lands/	waters of regional importance.
G3.3 Improves status of federa Increases population = 3 Attracts listed species to	I and/or state listed threatened or endanger Meets identified tasks in recovery plan = site = 1	
G3.4 Restores or creates ecolor Yes=3 No=0	ogical features considered to be unusual, un	ique or rare in region.
G3.5 Special Considerations. Description:	Circumstances considered important to wei	ghting.
Yes=3 No=0		
G4.0 Subtotal of ======= G3.1 to G3.5		
G5.0 Total of Columns		
G6.0 Fraction. Divide line G4.0 by lin	e G5.0	
G7.0 Multiply line G6.0 by 0.50 G6.0 X 0.50		
G8.0 Weighting Factor. Add either 0. G8.1 G7.0+0.100	100 or 0.083 to G7.0 depending on which p	earameter is "N/A" on WRAP score.
G8.2 G7.0+0.100	N/A	
G8.3 G7.0+0.083		
G9.0 Note		

Temporal Loss Worksheet

Purpose is to take into account time lag between impact and when mitigation is totally successful. Note: This is NOT risk of failure.

Assumption: Mitigation area is not 100 percent effective when it is initially completed.

- a. Read the definitions on the T Worksheet for
 - \Box YS = Year Start of mitigation
 - \neg YF = Year Finished of mitigation
- b. Note that these years are in relation to year of impact: i.e. if mitigation starts same year as impact, YS = 0. If mitigation starts after completion of work (2yrs) YS = +2.
- c. Enter YS and YF on Polygon Worksheet for each WRAP function i.e. For example, for forested restoration YF for the hydrology function may equal 5 (restored in 5 years) versus 40 (restored in 40 years) years for overstory function. So you need to think about the temporal loss for EACH WRAP function that's applicable. (Dependent on design, sequencing of mitigation).
- d. go to table on T Worksheet and find the number at the intersection of the YF and YS. Enter this number on Polygon Worksheet)

Temporal Loss Factor "T"

version 4.2



This table (version 4.2) to be used after 1Dec99. Version 4.0 & 4.1 are obsolete. Version 4.2 based on discount rate of 3%.

YS = 0 = Year of Impact [for an individual permit] = Credit Release Year (T_R) [for a mitigation bank]

YS = Year Start = the Year the construction/planting work at the compensatory mitigation site starts.

- (a) If the compensatory mitigation work starts within the same 12 month period as the impact/credit release, then YS = 0.
- (b) YS = -1 if the compensatory mitigation work starts one year prior to the impact/credit release, YS = -2 if two years prior, etc. (for example, if mitigation starts in 1999 but impact/credit release in 2000, YS = -1)
- (c) YS = +1 if the compensatory mitigation work starts one year after the impact/credit release, YS = +2 if two years after, etc. (for example, if impact/credit release in 2000 and mitigation starts in 2001, YS = +1)
- **YF = Year Finish** = when the compensatory mitigation achieves the functional capacity that is described by the "with project" functional assessment score. After this year, the compensatory mitigation is expected to stay at or above the "with project" score either naturally or as the result of arrangements for perpetual management.
 - (a) If the "with project" score is achieved within the same 12 month period as the impact/credit release, then YF = 1.
 - (b) Otherwise, YF = YS + the number of years to reach the "with project" score (for example, if saplings are planted in the same year as the impact/credit release and the "with project" score is based on 35 years of growth, then YF = 0 + 35 = 35; but, if the saplings are planted two years prior to impact/credit release, YS = -2, then YF = (-2) + 35 = 33).

YS=	YF=	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
-4	T=	1.0000	0.9944	0.9859	0.9754	0.9639	0.9517	0.9391	0.9266	0.9133	0.9008	0.8878	0.8750	0.8622	0.8496	0.8371
-3	T=	1.0000	0.9933	0.9835	0.9719	0.9593	0.9463	0.9330	0.9199	0.9061	0.8931	0.8798	0.8667	0.8536	0.8408	0.8281
-2	T=	1.0000	0.9916	0.9802	0.9672	0.9535	0.9396	0.9256	0.9119	0.8976	0.8842	0.8706	0.8571	0.8439	0.8308	0.8180
-1	T=	1.0000	0.9888	0.9752	0.9606	0.9458	0.9310	0.9163	0.9021	0.8873	0.8737	0.8598	0.8462	0.8327	0.8195	0.8066
0	T=	1.0000	0.9833	0.9670	0.9507	0.9350	0.9195	0.9043	0.8899	0.8748	0.8611	0.8471	0.8333	0.8199	0.8066	0.7937
+1	T=		0.9665	0.9503	0.9346	0.9187	0.9034	0.8883	0.8736	0.8597	0.8450	0.8318	0.8182	0.8049	0.7918	0.7789
+2	T=			0.9340	0.9182	0.9032	0.8876	0.8727	0.8581	0.8438	0.8305	0.8160	0.8033	0.7901	0.7772	0.7645
+3	T=				0.9025	0.8871	0.8727	0.8642	0.8429	0.8288	0.8149	0.8021	0.7879	0.7757	0.7629	0.7504
+4	T=					0.8718	0.8569	0.8430	0.8280	0.8140	0.8003	0.7868	0.7745	0.7606	0.7489	0.7365
YS=	YF=	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
-4	T=	0.8248	0.8126	0.8005	0.7887	0.7770	0.7655	0.7541	0.7430	0.7320	0.7212	0.7105	0.7001	0.6898	0.6797	0.6697
-3	T=	0.8155	0.8032	0.7910	0.7791	0.7673	0.7557	0.7443	0.7331	0.7221	0.7112	0.7006	0.6901	0.6798	0.6697	0.6597
-2	T=	0.8053	0.7928	0.7806	0.7686	0.7567	0.7451	0.7337	0.7224	0.7114	0.7005	0.6899	0.6794	0.6691	0.6590	0.6491
-1	T=	0.7938	0.7813	0.7690	0.7570	0.7451	0.7335	0.7221	0.7109	0.6998	0.6890	0.6784	0.6680	0.6577	0.6476	0.6377
0	T=	0.7810	0.7685	0.7562	0.7442	0.7324	0.7208	0.7094	0.6983	0.6873	0.6766	0.6660	0.6557	0.6455	0.6355	0.6257
+1	T=	0.7664	0.7540	0.7419	0.7300	0.7183	0.7068	0.6956	0.6846	0.6737	0.6631	0.6527	0.6424	0.6323	0.6225	0.6128
+2	T=	0.7520	0.7398	0.7278	0.7161	0.7045	0.6932	0.6821	0.6711	0.6604	0.6499	0.6396	0.6294	0.6195	0.6097	0.6001
+3	T=	0.7380	0.7259	0.7141	0.7024	0.6910	0.6798	0.6688	0.6580	0.6474	0.6370	0.6268	0.6167	0.6069	0.5972	0.5877
+4	T=	0.7243	0.7123	0.7006	0.6967	0.6777	0.6667	0.6558	0.6451	0.6346	0.6243	0.6142	0.6043	0.5946	0.5850	0.5756
YS=	YF=	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
YS= -4	YF= T=	31 0.6599	32 0.6503	33 0.6408		35 0.6224						41 0.5705	42 0.5605	43 0.5524	44 0.5465	45 0.5368
	T=			0.6408	0.6315		0.6133	0.6045	0.5958	0.5872	0.5788	0.5705		0.5524		
-4	T= T=	0.6599	0.6503 0.6403	0.6408 0.6308	0.6315 0.6215	0.6224	0.6133 0.6034	0.6045 0.5946	0.5958 0.5859	0.5872 0.5774	0.5788 0.5690	0.5705 0.5608	0.5605	0.5524 0.5427	0.5465 0.5369	0.5368 0.5271
-4 -3	T= T= T=	0.6599 0.6499	0.6503 0.6403	0.6408 0.6308	0.6315 0.6215 0.6110	0.6224 0.6124	0.6133 0.6034 0.5930	0.6045 0.5946 0.5842	0.5958 0.5859 0.5756	0.5872 0.5774 0.5671	0.5788 0.5690 0.5588	0.5705 0.5608 0.5506	0.5605 0.5507	0.5524 0.5427 0.5326	0.5465 0.5369	0.5368 0.5271 0.5171
-4 -3 -2	T= T= T= T=	0.6599 0.6499 0.6393	0.6503 0.6403 0.6297	0.6408 0.6308 0.6203 0.6091	0.6315 0.6215 0.6110 0.5999	0.6224 0.6124 0.6019	0.6133 0.6034 0.5930 0.5820	0.6045 0.5946 0.5842 0.5733	0.5958 0.5859 0.5756	0.5872 0.5774 0.5671 0.5563	0.5788 0.5690 0.5588	0.5705 0.5608 0.5506	0.5605 0.5507 0.5405	0.5524 0.5427 0.5326	0.5465 0.5369 0.5268	0.5368 0.5271 0.5171 0.5066
-4 -3 -2 -1	T= T= T= T=	0.6599 0.6499 0.6393 0.6280	0.6503 0.6403 0.6297 0.6185 0.6066	0.6408 0.6308 0.6203 0.6091 0.5973	0.6315 0.6215 0.6110 0.5999 0.5882	0.6224 0.6124 0.6019 0.5909	0.6133 0.6034 0.5930 0.5820 0.5704	0.6045 0.5946 0.5842 0.5733 0.5617	0.5958 0.5859 0.5756 0.5647 0.5532	0.5872 0.5774 0.5671 0.5563 0.5449	0.5788 0.5690 0.5588 0.5480 0.5367	0.5705 0.5608 0.5506 0.5399 0.5286	0.5605 0.5507 0.5405 0.5298	0.5524 0.5427 0.5326 0.5219 0.5108	0.5465 0.5369 0.5268 0.5163	0.5368 0.5271 0.5171 0.5066 0.4956
-4 -3 -2 -1	T= T= T= T= T=	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939	0.6408 0.6308 0.6203 0.6091 0.5973	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168	0.5605 0.5507 0.5405 0.5298 0.5186	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864
-4 -3 -2 -1 0 +1	T= T= T= T= T= T=	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729
-4 -3 -2 -1 0 +1 +2	T= T= T= T= T= T= T=	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3	T= T= T= T= T= T= T=	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3 +4	T= T= T= T= T= T= T= T=	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784 0.5664	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693 0.5574	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603 0.5485	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515 0.5398	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428 0.5312	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343 0.5228	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260 0.5146	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178 0.5064	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097 0.4985	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018 0.4907	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3 +4	T= T= T= T= T= T= T= T= T=	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784 0.5664 46 0.5291	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693 0.5574	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603 0.5485 48	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515 0.5398 49	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428 0.5312	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343 0.5228 51 0.4949	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260 0.5146 52 0.4880	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178 0.5064 53 0.4813	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097 0.4985 54 0.4746	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018 0.4907 55 0.4680	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3 +4 YS=	T=	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784 0.5664 46 0.5291	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693 0.5574 47 0.5216 0.5120	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603 0.5485 48 0.5142 0.5047	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515 0.5398 49 0.5091 0.4996	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428 0.5312 50	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343 0.5228 51 0.4949 0.4856	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260 0.5146 52 0.4880 0.4787	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178 0.5064 53 0.4813 0.4720	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097 0.4985 54 0.4746 0.4654	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018 0.4907 55 0.4680 0.4589	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3 +4 YS= -4 -3	T=	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784 0.5664 46 0.5291 0.5195	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693 0.5574 47 0.5216 0.5120	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603 0.5485 48 0.5142 0.5047 0.4948	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515 0.5398 49 0.5091 0.4996	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428 0.5312 50 0.4998 0.4903	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343 0.5228 51 0.4949 0.4856 0.4759	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260 0.5146 52 0.4880 0.4787 0.4691	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178 0.5064 53 0.4813 0.4720 0.4624	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097 0.4985 54 0.4746 0.4654	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018 0.4907 55 0.4680 0.4589 0.4494	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3 +4 YS= -4 -3 -2	T= T	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784 0.5664 46 0.5291 0.5195 0.5095	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693 0.5574 47 0.5216 0.5120 0.5021 0.4917	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603 0.5485 48 0.5142 0.5047 0.4948 0.4845	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515 0.5398 49 0.5091 0.4996 0.4898 0.4796	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428 0.5312 50 0.4998 0.4903 0.4805	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343 0.5228 51 0.4949 0.4856 0.4759 0.4658	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260 0.5146 52 0.4880 0.4787 0.4691 0.4591	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178 0.5064 53 0.4813 0.4720 0.4624 0.4524	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097 0.4985 54 0.4746 0.4654 0.4558 0.4459	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018 0.4907 55 0.4680 0.4589 0.4494	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3 +4 YS= -4 -3 -2 -1	T= T	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784 0.5664 46 0.5291 0.5195 0.5095 0.4991	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693 0.5574 47 0.5216 0.5120 0.5021 0.4917	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603 0.5485 48 0.5142 0.5047 0.4948 0.4845	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515 0.5398 49 0.5091 0.4996 0.4898 0.4796	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428 0.5312 50 0.4998 0.4903 0.4805 0.4703	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343 0.5228 51 0.4949 0.4856 0.4759 0.4658	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260 0.5146 52 0.4880 0.4787 0.4691 0.4591	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178 0.5064 53 0.4813 0.4720 0.4624 0.4524	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097 0.4985 54 0.4746 0.4654 0.4558 0.4459	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018 0.4907 55 0.4680 0.4589 0.4494 0.4395	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3 +4 YS= -4 -3 -2 -1 0	T= T	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784 0.5664 46 0.5291 0.5195 0.5095 0.4991 0.4882	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693 0.5574 47 0.5216 0.5120 0.5021 0.4917 0.4809	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603 0.5485 48 0.5142 0.5047 0.4948 0.4845 0.4737	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515 0.5398 49 0.5091 0.4996 0.4898 0.4796 0.4690	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428 0.5312 50 0.4998 0.4903 0.4805 0.4703 0.4598	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343 0.5228 51 0.4949 0.4856 0.4759 0.4658 0.4553	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260 0.5146 52 0.4880 0.4787 0.4691 0.4487 0.44378	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178 0.5064 53 0.4813 0.4720 0.4624 0.4524 0.4421	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097 0.4985 54 0.4746 0.4558 0.4459 0.4357	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018 0.4907 55 0.4680 0.4589 0.4494 0.4395 0.4293	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619
-4 -3 -2 -1 0 +1 +2 +3 +4 YS= -4 -3 -2 -1 0 +1	T= T	0.6599 0.6499 0.6393 0.6280 0.6160 0.6032 0.5907 0.5784 0.5664 46 0.5291 0.5195 0.5095 0.4991 0.4882 0.4770	0.6503 0.6403 0.6297 0.6185 0.6066 0.5939 0.5815 0.5693 0.5574 47 0.5216 0.5120 0.5021 0.4917 0.4809 0.4696 0.4586	0.6408 0.6308 0.6203 0.6091 0.5973 0.5847 0.5724 0.5603 0.5485 48 0.5142 0.5047 0.4948 0.4845 0.4737 0.4625 0.4516	0.6315 0.6215 0.6110 0.5999 0.5882 0.5757 0.5635 0.5515 0.5398 49 0.4996 0.4996 0.4996 0.4796 0.4690 0.4556 0.4447	0.6224 0.6124 0.6019 0.5909 0.5792 0.5668 0.5547 0.5428 0.5312 50 0.4998 0.4903 0.4805 0.4703 0.4598 0.4511	0.6133 0.6034 0.5930 0.5820 0.5704 0.5581 0.5461 0.5343 0.5228 51 0.4949 0.4856 0.4759 0.4658 0.4553 0.4420 0.4338	0.6045 0.5946 0.5842 0.5733 0.5617 0.5496 0.5376 0.5260 0.5146 52 0.4880 0.4787 0.4691 0.4591 0.4378 0.4378	0.5958 0.5859 0.5756 0.5647 0.5532 0.5412 0.5293 0.5178 0.5064 53 0.4720 0.4624 0.4524 0.4524 0.4314 0.4209	0.5872 0.5774 0.5671 0.5563 0.5449 0.5329 0.5212 0.5097 0.4985 54 0.4746 0.4654 0.4658 0.4459 0.4357 0.4250 0.4146	0.5788 0.5690 0.5588 0.5480 0.5367 0.5248 0.5132 0.5018 0.4907 55 0.4680 0.4589 0.4494 0.4395 0.4293 0.4188 0.4084	0.5705 0.5608 0.5506 0.5399 0.5286 0.5168 0.5053 0.4940	0.5605 0.5507 0.5405 0.5298 0.5186 0.5090 0.4976 0.4864	0.5524 0.5427 0.5326 0.5219 0.5108 0.4992 0.4900 0.4789	0.5465 0.5369 0.5268 0.5163 0.5053 0.4916 0.4803 0.4715	0.5368 0.5271 0.5171 0.5066 0.4956 0.4864 0.4729 0.4619

Proximity Worksheet:

Purpose is to take into account distance from impact area to mitigation area. Two components; one based on wildlife and one based on watershed.

Assumption: Mitigation is best in the same watershed.

- a. Enter an identification number in the upper right corner
- b. Fish and Wildlife:
 - 1) In line X1, answers a series of questions on wildlife. Assign yes or no to each question. Is the guild found on the impact site? (y or n) Question A. Does the location of the mitigation site relative to the impact site reduce the ability to mitigate for that guild (e.g. impact site within foraging range of woodstork rookery; however mitigation site is outside that range therefore the answer would be yes Question B)
 - 2) Total the number of yes's and no's for each guild. Place number of each into block (X2.2)
 - 3) In line X2.3, follow instructions for division to determine the fish and wildlife score:
- c. Watershed (Diminishing Relevance): (Do only if outside waters of impact area)
 - 1) In line X3.1, enter the name and acreage of the impact site watershed.
 - 2) In line X3.2, enter the name and acreage of the mitigation site watershed
 - 3) In line X3.3, enter names and acreage of watersheds between impact and mitigation site.
 - 4) In line X3.4, add watershed acreages.
 - 5) In line X3.5, enter the name and acreage of the standardized mitigation service areas (for individual projects already defined by State). Banks have own service areas defined.
 - 6) In line X3.6, follow instruction for addition and division to determine the watershed number (WN).
- d. Final Calculation: Block X3.0. Enter in column X of Project Worksheet

Proxin	mity Worksheet		version 4.0	Proxi	imity#	Χ
X1.0 Locat	ition of mitigation (place):					
Ques Ques	stion B: Does the location o	of the mitigation	n site relative	nswer either "Yes" or "No" fo to the impact site <u>reduce</u> the answer to A is "Yes", answer	e ability to mit	or "No"
X2.1	Guilds	Present?	Reduced?	_	Present?	Reduced?
	Neotropical Migrants:	А	В	Reptiles:	А	В
	Wading Birds:	Α	В	Freshwater Fish:	А	В
	Raptors:	А	В	Small Mammals:	А	В
	Waterfowl:	А	В	Large Mammals:	А	В
	Amphibians:	А	В	Invertebrates:	А	В
X2.2	Number of yes's for	Question B:	31	Number yes's for A:	A1	
X2.3	Fish and Wildlife Compor	nent Score = F	FN = B1 divide	ed by A1:	FN]
	-		use WN from	watershed as impact: skip st table if Mitigation Bank Instr me of Watersheds	-	
X3.1	Mitigation site is located	within:	Ivan	ne or watersheus	Size = W1: \	
X3.2	. 9				Size = W1: \	
X3.3	·				Size = W1: \	
	mitigation and impact site				Size = W1: \	
	<u> </u>				Size = W1: \	 W5
X3.4	W1 + W2 + W3 + W4 +	- W5 = W6: V	<u>Γ</u>	acre W6 divided	L l by W1=W7:	
X3.5	(Note: If mitigation provid	ded by a Mitiga	ation Bank, the	in which mitigation and impa en use the service area desi a service area appropriate t	ignated for tha	at bank.)
			Size = W8:		by W1=W9:	•
X3.6	Diminishing Relevance S	Score = [(W7	- 1.0) divided	by (W9 - 1.0)] = WN	WN	
X4.0 Prox	imity Factor = X = { 1.0 }	divided by {	[(FN + WN	l) divided by (2.0)]+	[1.0] }=	х

Copy this number into the Proximity Factor column of the Project Worksheet. Use the same number for all of the "off-site mitigation" polygons located in the location (place) described at line X1.0 above.

Risk Worksheet (R):

Purpose of risk is to account for mitigation not being successful. Expressed as a percentage of success (100%). (I.E.) Five- percent chance of failure, Risk factor is .95.

Assumption: Mitigation is rarely performed under ideal conditions.

- a. Enter a identification number in the upper right corner
- b. Answer 5 questions under R2.0 for each function
- c. Answer will be 0, 1, 2, or 3. (0= tends to low risk; 3 = tends to high risk)
- d. Follow instructions for calculation on worksheet
- e. You will arrive at a risk factor that is transferred to polygon worksheet.

Risk Worksheet	version 4.1	Risk # R
This version (version 4.1) differs from version 4.0 or		
R1.0 Task Description:		
This Risk calculation is adapted from a DRA developed the Mitigation Bank Review Proce		· · · · · · · · · · · · · · · · · · ·
	Overstory Ground Up/Wet Cover Buffer	Hydrology Water Quality
Overstory/Shrub & High = 1 removal); Low Med = 2 Hydrology: High=	& Water Quality: High=Creation; Med & Ground Cover: High=Creation (planti w=Preservation Enery intensive (pumping); Med=Struc c.); Low = Total restoration (backfill dite	ing); Med=Enhancement (exotic etural Mods (adjustable weirs,
R2.2 Size of and/or the landscape conformation in the second seco	context of the polygon : High=Highly predisposed to disturbately predisposed to disturbance; Low=N Unreliable source; Med=Moderately regh=Highly predisposed to contamination; Low left predisposed to contamination; Low	Not predisposed eliable; High: Highly reliable on;
High = 1 Med=Moderate	& Ground Cover: High=High potential fe potential for exotic/invasion; Low=M High maintenance (pumps, etc.); Med ntenance	inimal potential
	: Low=Fire management & Ground Cover: High=Mechanical cor al control of exotic/invasives; Low=Fire	
	pervisor (note: suggest not use pendin High=0=Neophyte; Med=1=Has crede	

======

R4.0 Risk Factor. Divide line R3.0 by 15 by 12. Copy numbers onto line P8.0 of Polygon Worksheet.

======

======

R3.0 Subtotal of

R5.0 Note

R2.1 to R2.5

R3.0 / 15.0 12.0

WRAP Worksheet

WRAP Field	Data Sheet	version 4.0	WRAP	# W
			ACRES:	
LAND USE:				
TICK ONE:	EXIST CONDITION	WITH (RESULT OF) PROJECT	WITHOUT PROJECT
NOTES:	ON SCORE:			DED BY 3 =
WETLAND CANOPY	(OVERSTORY/SHRUB) SC	ORE:		
WETLAND GROUNDO	COVER SCORE:		SCORE DIVII	DED BY 3 =
	(UP/WET BUFFER) SCORE			DED BY 3 =
FIELD HYDROLOGY NOTES:	SCORE:			DED BY 3 =
NOTES:	MENT (WATER QUALITY) :			DED BY 3 =

created by: Mdiaz/Miami Oct98 revised Nov98